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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/580,839	12/19/2006	Jean-Luc Bernard	291090US0X PCT	7582

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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

ZHU, WEIPING

ART UNIT	PAPER NUMBER
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1734

NOTIFICATION DATE	DELIVERY MODE
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06/24/2011

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/580,839	Applicant(s) BERNARD ET AL.	
	Examiner WEIPING ZHU	Art Unit 1734	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,6,7 and 10-21 is/are pending in the application.
- 4a) Of the above claim(s) 11-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6,7,10 and 17-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Claims

1. Claims 1, 3, 4, 6, 7, 10 and 17-21 are currently under examination, wherein claim 1 has been amended in applicant's amendment filed on April 14, 2011.

Status of Previous Rejections

2. The previous rejections of claims 1, 3, 4, 6, 7, 10 and 17-21 under 35 U.S.C. 103(a) as stated in the Office action dated February 22nd, 2011 are maintained as follows:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3, 4, 6, 7, 10 and 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 06-240392 A in view of Costin (US 3,980,473).

With respect to claims 1, 3, 4, 6, 7, 10, 17-19 and 21, JP ('392 A) discloses a Co base alloy having by wt.% a composition as shown in the table below (abstract).

Elements	Instant Claims	JP ('392 A)	Overlapping Ranges
Cr	23-34	22-37	23-34
Ni	6-12	5-15	6-12
Hf		0.1-5	
Ti	0.5-5		
Ta	0-7	5-12	5-7
C	0.2-1.2	0.22-1.2	0.22-1.2
Fe	Less than 3		
Si	Less than 1	0.01-2	0.01-1

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Mn	Less than 0.5	0.01-2	0.01-0.5
Co	Balance	Balance	

The contents of Cr, Ni, Ta, C, Si and Mn as disclosed by JP ('392 A) overlap the contents respectively as claimed in the instant claims 1, 3, 10, 17 and 21. JP ('392 A) does not disclose the contents of Ti as claimed in the instant claims 1, 6, 7 and 19. Costin ('473) discloses a Co based alloy containing by weight 0.25-1.5% of Ti (col. 1, lines 40-50). It would have been obvious to add by weight 0.25-1.5% of Ti to the alloy of JP ('392 A) as disclosed by Costin ('473) in order to improve the corrosion resistance and high temperature strength of the alloy as disclosed by Costin ('473) (col. 1, lines 29-33). The content range of Ti as disclosed by Costin ('473) overlap the ranges as claimed in the instant claims 1, 6, 7 and 19. A prima facie case of obviousness is established. See MPEP 2144.05 I. The claimed Fe content of less than 3% does not require the presence of Fe, because the claimed content also includes the 0%. The (Ti + Ta)/C ratios of JP ('392 A) in view of Costin ('473) would obviously overlap the (Ti + Ta)/C ratios as claimed in the instant claims 4 and 18 because the contents of Ti, Ta and C as disclosed by JP ('392 A) in view of Costin ('473) overlap the claimed contents of Ti, Ta and C respectively as discussed above. JP ('392 A) further discloses that Cr would dissolve in the matrix (i.e. Co) as a solid solution to enhance the elevated temperature oxidation resistance of the alloy (paragraph [0007], machine translation). The transitional phrase "consisting essentially of" in claim 1 limits the scope of a claim to the specified materials or steps and those that do not materially affect the basic and novel characteristic(s) of the claimed invention. See MPEP 2111.03. In the instant case, some additives still can be included as desired in the alloy composition to achieve

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desired properties. The Hf is added to the composition of JP ('392 A) in view of Costin ('473) to increase the abrasion resistance and elevated temperature oxidation resistance of the alloy (paragraph [0009], machine translation). The applicant has not provided the evidence to show that the addition of Hf in the prior art would materially change the characteristics of the instant composition. Therefore, JP ('392 A) in view of Costin ('473)'s composition meets the limitations of the instantly claimed alloy composition.

With respect to claim 20, JP ('392 A) disclose that the alloy further contains Zr (abstract).

Response to Arguments

4. The applicant's arguments filed on April 14, 2011 have been fully considered but they are not persuasive.

First, the applicant argues that the 1.132 declaration filed by the applicant on March 30, 2010 demonstrated the criticality of titanium weight concentration of at least 0.5% and the examiner's refusal to consider the declaration is improper. In response, the examiner notes that Costin ('473) discloses a Co based alloy containing by weight 0.25-1.5% of Ti (col. 1, lines 40-50) which overlaps the instantly claimed Ti contents. A prima facie case of obviousness is established. See MPEP 2144.05 I. It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the Ti contents within the instantly claimed Ti contents (e.g. 0.5-1.5%) with an expectation of success because Costin ('473) discloses the same utility of the Ti content over the entire disclosed range of 0.25-1.5%. Furthermore, Costin ('473) further discloses that

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the preferred Ti content by weight is 0.55-0.80% (col. 1, line 60 to col. 2, line 10). The disclosure of Costin ('473) renders the 1.132 declaration moot because Costin ('473) discloses the Ti contents of greater than 0.5% which would provide the same useful lives as the instantly claimed Ti contents.

Second, the applicant argues that none of the cited references provide any suggestion that Ti content is a result effective variable. In response, the examiner notes the ground of rejection of the instantly claimed Ti contents is based on the overlapping Ti content ranges between the instant invention and prior art references rather than result effective variables. See MPEP 2144.05 I. JP ('392 A) in view of Costin ('473) does not have to optimize the Ti content because the Ti content of JP ('392 A) in view of Costin ('473) overlaps the instantly claimed Ti contents

Third, the applicant argues that JP ('780 A) teaches away from such high Ti contents. In response, the examiner notes that JP ('780 A) has not been relied upon as the ground of rejection in the Office action dated February 22nd, 2011 and this Office action at all.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Weiping Zhu whose telephone number is 571-272-6725. The examiner can normally be reached on 8:30-16:30 Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emily Le can be reached on 571-272-0903. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Weiping Zhu/
Examiner, Art Unit 1734
6/6/2011

/Emily M Le/
Supervisory Patent Examiner, Art Unit 1734